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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/031,704	06/04/2002	Peter Bollinger		8295

7590 06/28/2005

Diller Ramik & Wight
Merrion Square
Suite 101
7345 McWhorter Place
Annandale, VA 22003

EXAMINER

DIEP, NHON THANH

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/031,704	BOLLINGER, PETER	
	Examiner	Art Unit	
	Nhon T. Diep	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 10-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

1. With regard to the cited foreign reference DE 198 21 800 A1, the examiner cannot review because it is not in English language.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 10-11 and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Beaty et al (US 6,862,365).

Beaty et al discloses a method and apparatus for three dimensional inspection of electronic components comprising the same inspection device for components (el. 20 of fig. 1A), comprising a video camera recording a first picture (el. 62 of fig. 1B) of the component from a first direction (20-34-36-38-39-16-15), and an optical deflection device (20-30-32-38-39-16-15) which supplies a second picture (29) of the component (11) to the video camera (40) (camera 15 of figure 1A), the second picture being taken from a direction different from the first direction, and both pictures are reproduced at different locations (el. 60 and 66 are two side perspective views) of the video image produced by the video camera characterized in that the directions from which the two pictures are taken are directed to different sides of the recording area and that a length

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compensation device (el. 36 of fig. 1A) is provided in the beam path of one of the pictures between the component and the video camera, for making the length of this beam path equal to that of the other beam path (col. 6, ln 16-20) as specified in claim 10; wherein the beam paths of both pictures are incident in parallel into the video camera (camera 15 of fig. 1A) 11; and an illumination device comprises two light sources, and that the beam path of one of the pictures passes between these light sources (fig. 15, el. 1017 and light beam in between) as specified in claim 18.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beaty et al (US 6,862,365).

As applied to claim 10 above, it is noted that Beaty et al does not particularly disclose a beam combining device is provided that directs the pictures of two spaced components simultaneously to the video camera as specified in claims 12-13. Beaty et al further teaches "By utilizing only one camera and adding an additional set of prisms on the reticle 400 these other devices may be inspected." And therefore, it would have been obvious to one of ordinary skilled in the art at the time the invention was made to modify the system of Beaty et al by utilizing addition set of prisms to inspect two spaced component simultaneously since two sides of the same component basically are the

same as two spaced components. Doing so would help to inspect different devices with the same system includes savings in cost, and floor space in the factory. Additionally this design allows more flexibility in production planning and resource management.

6. Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beaty et al (US 6,862,365), in view of Campbell et al (US 6,418,872).

As applied to claim 10 above, it is noted that Beaty et al does not particularly disclose a beam combining device is provided that directs the pictures of two spaced components simultaneously to the video camera wherein a first illumination device is provided that illuminates the component to generate the first picture, and a second illumination device is provided that illuminates the component for generating the second picture, and that the illumination devices emit light of different light characteristics such that the light of one picture is not affected by the illumination of the other picture; and wherein the different light characteristics are different wavelengths as specified in claims 14-15. Campbell et al teaches that "a suitable illumination source should efficiently and brightly emit all or most of its energy at the desired wavelength or wavelength ranges depending on the articles and defects being inspected."

Alternatively, multiple illumination sources having different spectral emissions can be used to produce illumination having selected spectral bands for detecting and classifying particular articles and defects'. And therefore, it would have been obvious to one of ordinary skilled in the art at the time the invention was made to modify the system of Beaty et al by using lights with different wavelengths for illuminating the inspecting components. Doing so would help to provide better images.

Regarding claim 16: The combination of Beaty et al and Campbell et al would obviously result in a illumination device illuminates the component directly at the same side where the picture is taken, and that the other illumination device illuminates the component with counter light as specified in claim 16, because it would provide better lighting to an object or side of an object to be pictured.

Allowable Subject Matter

7. Claim 17 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Quist (US 6,813,016) discloses a co-planarity and top-down examination method and optical module for electronic leaded components.

b. Shibata et al (US 6,762,831) discloses a method and apparatus for inspecting defects.

c. Spigarelli et al (US 4,914,513) discloses a multi-vision component alignment system

d. Kvamme et al (US 6,879,390) discloses a multiple beam inspection apparatus and method

e. Van Den Brink (US 5,801,832) discloses a method of and device for repetitively imaging.

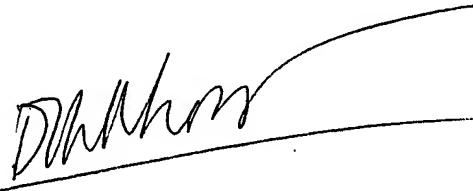
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- f. Nagai et al (US 6,366,310) discloses electronic parts mounting apparatus.
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhon T. Diep whose telephone number is 571-272-7328. The examiner can normally be reached on m-f.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris S. Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ND
6/24/2005



NHON DIEP
PRIMARY EXAMINER